

C 3
15. The composition of claim 1, wherein the complex has a half-life ranging from about 15 minutes to about 1 hour in the presence of supra physiological levels of biotin and an affinity constant ranging from about 1.0 to about 100.0 nanomolar.

C 4
20. The composition of claim 1, wherein the anti-biotin antibody comprises a therapeutic agent that is a cytotoxic agent.

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21. The composition of claim 1, wherein the anti-biotin antibody comprises a diagnostic agent attached thereto.

22. The composition of claim 1, wherein the anti-biotin antibody has a dual specificity.

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23. The composition of claim 22, wherein the anti-biotin antibody selectively binds to a tumor cell associated antigen.

24. The composition of claim 23, wherein the anti-biotin antibody selectively binds to a viral associated antigen.

C 5
34. A composition comprising:

- (a) a biotin conjugate comprising
(i) a biotin covalently coupled to
(ii) a chemokine having a pharmacological activity; and
(b) a pharmaceutically acceptable carrier, wherein the pharmaceutically acceptable carrier is suitable for parenteral administration.

41. The composition of claim 1, wherein the composition is lyophilized.

42. The composition of claim 1, further comprising a pharmaceutically acceptable carrier.

C 6
43. The composition of claim 42, wherein the pharmaceutically acceptable carrier is acceptable for a mode of delivery selected from the group consisting of: intradermal delivery, intramuscular delivery, intraperitoneal delivery, intravenous delivery, subcutaneous delivery, and controlled release delivery.

C 6
44. The composition of claim 1, wherein the biotin is selected from the group consisting of L-biotin, D-biotin and derivative thereof.

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45. The composition of claim 1, wherein the chemokine is selected from the group consisting of the chemokines of Table 1.

46. The composition of claim 1, wherein the chemokine has a carboxyl terminus and the biotin is covalent attached to the carboxyl terminus of the chemokine.

47. The composition of claim 1, wherein the biotin is covalently coupled to the pharmacologically active chemokine via a linker molecule.

48. The composition of claim 1, wherein the complex has a half-life ranging from about 15 minutes to about 1 hour in the presence of supra physiological levels of biotin.

49. The composition of claim 1, wherein the anti-biotin antibody has an affinity constant ranging from about 1.0 to about 100.0 nanomolar.

50. The composition of claim 1, wherein the anti-biotin antibody is selected from the group consisting of an intact antibody, and an antibody fragment.

51. The composition of claim 1, wherein the anti-biotin antibody is a human antibody or fragment thereof.

52. The composition of claim 1, wherein the anti-biotin antibody has a subclass selected from the group consisting of a IgG1 subclass, and an IgG3 subclass.

53. The composition of claim 1, wherein the anti-biotin antibody comprises a therapeutic agent attached thereto.

54. The composition of claim 1, wherein the complex has a half-life of from one day to one month in vivo.

55. The composition of claim 1, wherein the complex has a half-life of from one week to two weeks in vivo.

Remarks

Cancellation of claims 2-5, 8, 9, 12-14, 16-19, 25, 26, 28-30 and 36 in the first Preliminary Amendment (dated February 18, 2000) was solely for the purpose of reducing filing fees. Claims 2-5, 8, 9, 12-14, 16-19, 25, 26 and 28-30 were re-introduced into the application as claims 41-58 in the second Preliminary Amendment (dated January 29, 2001) following the Restriction Requirement. Claims 31-33, 35 and 37-40 were cancelled in the second Preliminary Amendment as being drawn to a non-elected invention. Claims 6, 7, 27 and 56-58 are cancelled in the present amendment. Applicants reserve the right to pursue the subject matter of the canceled claims in one or more continuing applications.

Claims 1, 10, 11, 34, 43, 45, 46, and 47 have been amended. Support for the amendments lies in the original claims as filed. No new matter has been added by virtue of the amendments.